

Notice of Allowability

Application No.

09/887,848

Examiner

Thuy V. Tran

Applicant(s)

NEWMAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 05/29/07 & Tel Interview 8/6/07.
2. ☒ The allowed claim(s) is/are 14, 15 and 17-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20070806.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


THUY V. TRAN
PRIMARY EXAMINER

DETAILED ACTION

This Office Action is in response to the Applicants' amendment submitted on 05/29/2007 and the telephone interview held on 08/06/2007. In virtue of this amendment and this telephone interview, claims 1-13 and 16 are canceled, and thus, claims 14-15 and 17-36 are now pending in the instant application.

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Mark E. Rose on 08/06/2007. The amendment includes:

Claim 16: canceled.

Reasons for Allowance

2. Claims 14-15 and 17-36 are allowed.
3. The following is an examiner's statement of reasons for allowance:

Prior art fails to disclose or fairly suggest:

- An electronic ballast for driving a gas discharge lamp, the ballast having improved input current THD comprising means for varying said duty cycle D responsive to said bus voltage to cause said energy storage device to draw more current from said AC power supply around the peak of each half cycle of said bus voltage and to cause said energy storage device to draw less current from said AC power supply around the

trough of each half cycle of said bus voltage, in combination with the remaining claimed limitations as called for in independent claim 14 (claim 15 is allowed since it is dependent on claim 14);

- An electronic ballast for driving a gas discharge lamp comprising a cat ear power supply for supplying power to the control circuit, said power supply adapted to draw power from the supply of sinusoidal alternating current power only during a predetermined portion of each half-cycle of the sinusoidal alternating current power, in combination with the remaining claimed limitations as called for in independent claim 17 (claims 18-24 are allowed since they are dependent on claim 17);
- An electronic ballast for driving a gas discharge lamp comprising a valley fill circuit for receiving the rectified direct current bus voltage and maintaining the bus voltage above a predetermined minimum voltage, said valley fill circuit including an energy storage element, an impedance, and a switch, said energy storage element adapted to be connected between said bus voltage and a circuit common by means of said impedance when said switch is in a first predetermined conductive state so as to store energy, in combination with the remaining claimed limitations as called for in independent claim 25 (claims 26-31 are allowed since they are dependent on claim 25);
- An electronic ballast for driving a gas discharge lamp, the improvement comprising a power supply operatively connected to draw power from said supply of sinusoidal alternating current power, said power supply further operatively connected to supply power to said control circuit, said power supply being the sole source of power for said

control circuit, in combination with the remaining claimed limitations as called for in independent claim 32 (claim 33 is allowed since it is dependent on claim 32); and

- A method for causing an electronic ballast comprising the steps of providing a power supply in said ballast for drawing current from said source of sinusoidal alternating current power during a predetermined portion of each half-cycle of said sinusoidal alternating current power, in combination with the remaining claimed limitations as called for in independent claim 34;
- In an electronic ballast, a method for decreasing ballast input current total harmonic distortion and reducing lamp current crest factor comprising within each said half-cycle, varying the conduction of the first controllably device in a predetermined manner so that the energy storing device draws more current from the AC supply during the middle portion of each said half-cycle, and less current from the AC supply during the beginning and ending portions of each said half-cycle, in combination with the remaining claimed limitations as called for in independent claim 35; and
- In an electronic ballast, including a valley-fill circuit having an energy storing device, a method for decreasing ballast input current total harmonic distortion comprising the steps of, within each half-cycle of the AC power supply voltage, varying the conduction of the first controllably device in a predetermined manner so that the energy storing device draws more current from the AC supply during the middle portion of each said half-cycle, and less current from the AC supply during the

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beginning and ending portions of each said half-cycle, in combination with the remaining claimed limitations as called for in independent claim 36.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Thuy V. Tran', written in a cursive style.

THUY V. TRAN
PRIMARY EXAMINER

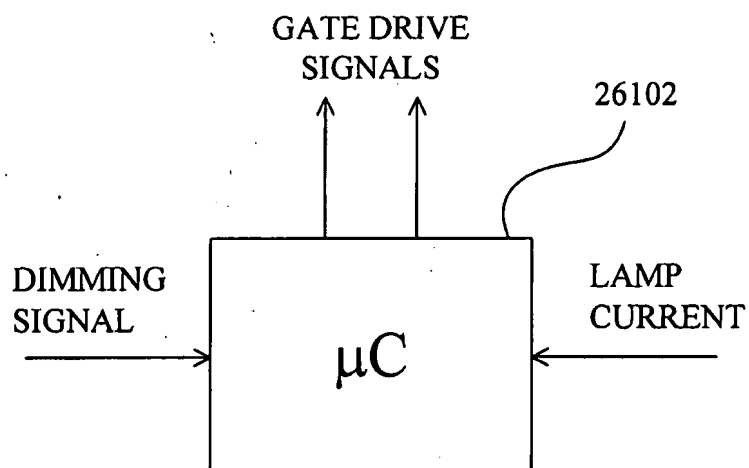


FIG. 24

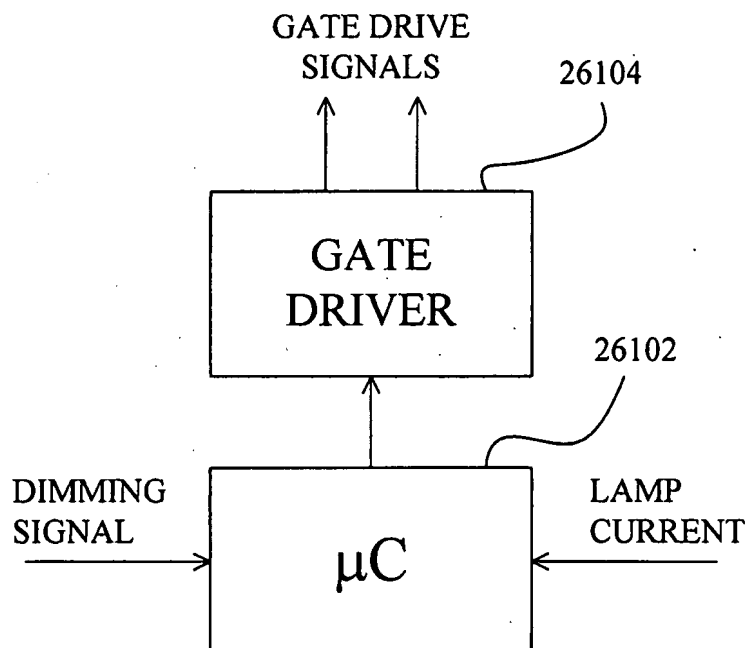


FIG. 25

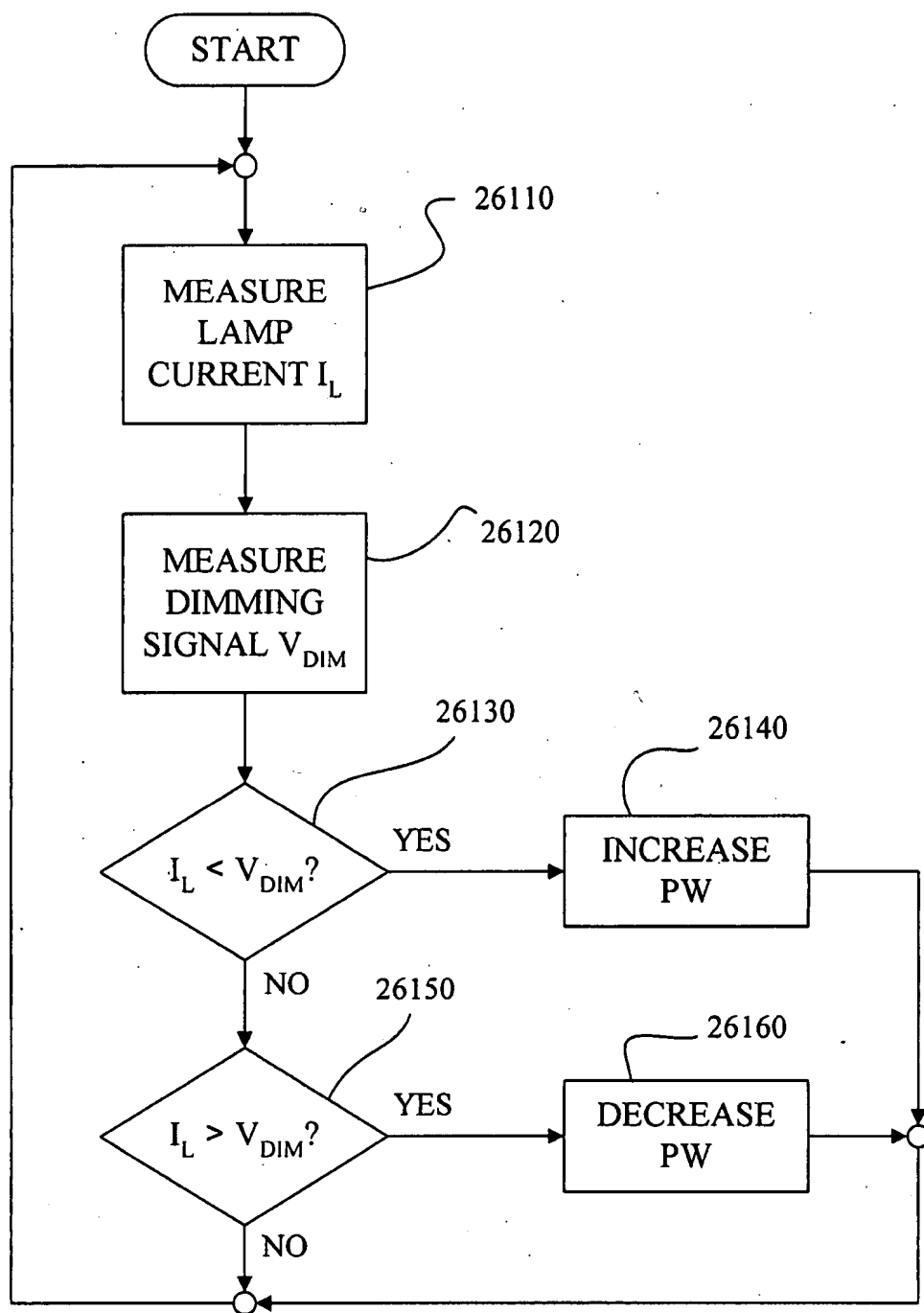


FIG. 26

AMENDMENTS TO THE DRAWINGS

Figs. 24 – 26 have been amended and are now provided with uniform drawing lines. The attached Replacement Sheets containing Figs. 24 – 26 replace the original sheets of Figs. 24 – 26.